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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,359	08/25/2003	John C. Ulicny	GP-302079	2220

7590 01/21/2005

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EXAMINER

KOSLOW, CAROL M

ART UNIT PAPER NUMBER

1755

DATE MAILED: 01/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/647,359	Applicant(s) ULICNY ET AL.	
	Examiner C. Melissa Koslow	Art Unit 1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 December 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10,16,17 and 22-28 is/are allowed.
- 6) ☒ Claim(s) 1-9,11-15 and 18-21 is/are rejected.
- 7) ☒ Claim(s) 29 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                            | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

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This action is in response to applicants' amendment of 2 December 2004. The amendments to the claims have overcome the 35 USC 112 rejections and the art rejection over claims 22-25. Applicant's arguments have been considered but are moot in view of the new grounds of rejection based on applicants' amendments to the claims.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-4, 8, 11-15 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. patent 5,804,095 in view of U.S. patents 3,904,448; 6,328,819 and 3,764,407.

U.S. patent 5,804,095 teaches a magnetorheological fluid formed by adding nitrided iron carbonyl particles having an average particle distribution of 3.845 microns to a magnetorheological fluid carrier. (column 10 and table 1). This patent does not teach how the particles were nitrided nor that the particles have an oxidation resistant surface. U.S. patents 3,904,448 and 6,328,819 teach the nitrided particles would have an improved oxidation resistance since the nitride coating forms an oxidation resistant surface to the nitride metal particles. U.S. patent 3,764,407 teaches the standard process for nitriding to heat a metal article in a nitrogen or a nitrogen/hydrogen atmosphere at a temperature and at a time sufficient to form a nitride coating on the surface of the article. The suggested atmosphere reads upon that claimed. Therefore one of ordinary skill in the art would have found it obvious to use this process to form the nitrided carbonyl iron particles of U.S. patent 5,804,095. The references suggest the claimed processes.

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Claims 1-9, 11-15 and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. patent 6,027,664 in view of U.S. patents 5,804,095; 3,904,448; 6,328,819 and 3,764,407.

U.S. patent 6,027,664 teaches a bimodal magnetorheological fluid comprising a first portion of magnetic particles having a size of 1-10 microns and a second portion of magnetic particles having a size 3-15 times that of the first portion or 3-150 microns. These size ranges overlap the claimed ranges. There is no teaching that the magnetic particles can be nitrided.

U.S. patents 3,904,448 and 6,328,819 teach the nitrided particles would have an improved oxidation resistance since the nitride coating forms an oxidation resistant surface on the nitrided metal particles and U.S. patent 5,804,095 shows that nitride particles can be used in magnetorheological fluids. Therefore one of ordinary skill in the art would have found it obvious to nitride the taught iron based metal magnetic particles, such as iron alloys, carbonyl iron, low carbon steel, silicon steel or iron, by the conventional method, as taught by U.S. patent 3,764,407 to form bimodal nitrided particles having improved oxidation resistance and then adding these particles to a magnetorheological carrier fluid.

Applicants' arguments with respect to patents '448 and '819 are noted but these references are now only being used to show that the nitride coating forms an oxidation resistant surface on the nitrided metal particles. Thus the fact they teach away from the use of nitrogen atmosphere does not negate the reasons why they were cited.

Claims 10, 16, 17 and 22-28 are allowable over the cited art of record.

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Claim 29 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

These claims are allowable for the reasons given in the previous action.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa Koslow whose telephone number is (571) 272-1371. The examiner can normally be reached on Monday-Friday from 8:00 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Bell, can be reached at (571) 272-1362.

The fax number for all official communications is (703) 872-9306.

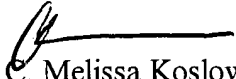
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cmk

January 19, 2005

  
C. Melissa Koslow  
Primary Examiner  
Tech. Center 1700